

State Forestry Nursery Sales
Concept Paper
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Goal:

To improve the public's ability to interact with the tree ordering process from the State Forest Nursery, by allowing the customer to go to the Internet and order trees on demand at any time of the day.

An inventory system and picking list will be available for DNR Forestry and Iowa Prison Industry staff. The inventory will be accessed and tracked immediately, and a picking list generated daily, so that DNR staff may package and ship the items sold. A tracking mechanism for delivery of the trees is also anticipated.

The vision is to develop a web enabled system for ease of use by the customer to allow online purchasing of products, specifically seedling trees, from the State Forest Nursery eliminating many of the manual processes. The result will streamline processes within the DNR for DNR Accounting, Customer Service and Forestry staff, while providing the best customer service possible utilizing updated technology. Enabling the ordering outside of normal business hours has the potential to increase the sales from the Nursery, which would be an additional benefit. Finally, compliance with the with PCI (Payment Card Industry) standards, the Treasurer's requirements for depositing money and our Accounting staff expectations will be assured.

Increase internal IT staff's ability to support the application.

Project Purpose:

The system needs to ensure that requirements for sales, accounting and auditing are met in an automated fashion that prevents as many errors and duplication as possible, while allowing the customer to purchase products utilizing a credit/debit card or other payment mechanisms. The driving factor for change in our process is the PCI compliance requirements which are in effect September 2007 of this year. Modifying the business processes to remove the recording of the credit card numbers manually will greatly simplify the PCI compliance process. It will also bring the department into compliance with PCI requirements.

In addition, the database has been in existence for many years and needs to be revamped to use newer technology and to allow customer convenience through access via the Internet.

In the future, this type of system might be used to enable the purchase of goods or services from the DNR, in addition to the sale of seedling trees to the sale of camping coupons, fishing and non game books, topology GIS maps, records, etc., but that is not the emphasis at this time. Rather, we prefer the coding is set up in a manner to enable reuse for these types of sales as the department determines there is a need.

The sales are mostly for Conservation and Recreation, but the system could be designed for reuse by for our Environmental Division if necessary in the future. Each area has different systems for sales now. Orders are taken in person, over the phone, or by mail. The benefit to the public in web enabling these sales is enabling the convenience of ordering via the Internet 24 x 7.

Background:

The current order process is as follows:

1. The office receives orders in several ways:
 - The majority of orders come in via a phone call to the State Nursery.
 - Customers can place orders at the main counter for the office as well.
 - Orders can be created on the web. These result in an email sent to the DNR containing contact information for the person placing the order, as well as the requested items. These orders turn into an invoice to the customer, which has payment handled by telephone or counter process.
2. Order information and payment information (including credit card numbers) are entered into the database application.
3. After time has passed, the credit/debit card payment information is exported to a file used as input to a batch process ran through ICVerify at Wells Fargo bank.
4. Wells Fargo bank processes the transactions in the batch, sending back a list of successful and non-successful transactions.
5. The non-successful transactions are handled by a manual process (usually telephone calls to the customer to verify information necessary for the transaction), then re-submitted to Wells Fargo bank for processing.
6. The successful transactions are used as input to the order database to update the status of the orders in the system.

Reports and Records: Monthly summary reports are generated on orders. One copy of these reports is stored at the State Forest Nursery, another copy is sent to the Cashier's Office in the Wallace Building. Normally the copy is sent to the Cashier's office via personal delivery, but use of Interoffice mail is possible as well.

Consideration was given to a short term fix such as using a point-of-sale device to process credit card orders as they arrive. This would have the benefits of lowering the amount of effort needed for PCI compliance by eliminating the electronic storage of

sensitive data, removing the office's network from the need to be PCI compliant, and verifying transactions at the time the order was placed. However there is a need to make a few changes to the current system to support this. If DNR is going to make changes, it may as well look all the application updates needed and work on them at the same time. Drawbacks to this short term solution is that it still maintains processes that require handling credit card numbers and the office, a point-of-sale device may not be especially user-friendly, and the cost of the device for short term usage.

The Long-term fix involves re-engineering the Nursery sales application so that its payment functions are handled through ITE's hosting environment. This is a solution that would remove the office staff from having to know or write down customer credit card numbers. Web enabling the system and utilizing existing applications designed by ITE for capturing and validating credit/debit card information (E-Payment Engine and Authorize.Net), seems to be a more appropriate approach. In addition, it will enable DNR to create a more user friendly, streamlined process.

Request:

Development of a Forestry Seedling Sales application submission system allowing web ordering with edits to reduce or eliminate error and duplication. Requirements outlined in the Project Purpose and Background Section above must be met. The major sales time occurs during the months of January through May of each year. This system must be in place by August 1, 2008. It must meet PCI requirements.

Printing of inventory and picking lists must be allowed at the State Forestry located in Ames Iowa as that is where the work processes take place. However, data and reports must be accessible and available to Central Office and other personnel working in other areas of the State.

Storage of records from this process needs to be improved as well. Automation of the process will enable us to redefine the proper records period and enable more secure storage and retrieval of the documents.

The system could eventually allow notification of customers when trees orders are being taken. Preferably the notification will be computer generated to reduce manual effort.

Whether or not previous sales information regarding a customer is incorporated into the system or whether the system should start fresh with all new orders is an issue for discussion.

The system must be designed so that it can be easily modified for additional enhancements in the future.

Cost Avoidance:

Simplifying the internal processes of making the tree order system PCI compliant, avoiding those direct costs. Web enabling the system will help avoid potential future

non-compliance fines and penalties associated with failure to meet PCI standards as determined during the audits. Security of confidential information will be assured.

Changing the system to a web enabled application will increase the DNR's ability to provide ongoing support for the application. The system has been developed and is maintained by one person from Iowa State University. She is the only DNR staff person who knows how to maintain the system. DNR pays a service to her to make updates and to do fixes. If she is unavailable, then it will be difficult to find someone who understands the application, the language it's written in, and the business processes it implements, within the DNR or through an outside consultant.

Staff time will be freed from taking orders and entering them and processing the payments, when the customer is allowed to do the ordering online. In addition, workloads will be more evenly balanced through improved inventory tracking and automated picking lists for orders. If necessary, staff time can be re-directed to tasks that would add value to improving and preserving Iowa's natural resources. Automated reports will free up time staff now spend in their compilation. In addition, reports will be available immediately to accounting, treasurer and auditor staff.

The DNR home page will be designed to include an online link facilitating the customer access to the sales process, eliminating unnecessary phone calls and allowing them to do business from the DNR home page.

Project Funds:

The DNR is requesting \$20,000 in IOWAccess funding for Phase I Scope Analysis. It is likely that the DNR will request IOWAccess funds for the Design Phase II and Phase III, Implementation in July. No funds were budgeted for this change. However, there may potential that a good, web-enabled tree order and inventory system, could be sold to other States, or at least used to demonstrate Iowa's innovative spirit.

Interested Parties: Parties interested in this project include the following:

Department of Natural Resources (DNR), DNR Conservation and Recreation staff, Iowa Prison Industries, The Treasurer's Office, the Auditor's Office, Natural Resource Commission (NRC), Iowa State University and the public as our customer.

Some of the Recipients of this Service:

Same as above.